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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,549	11/02/2001	Masahiko Hirose	04558.035002	5660

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ROSENTHAL & OSHA L.L.P.
1221 MCKINNEY AVENUE
SUITE 2800
HOUSTON, TX 77010

EXAMINER

SORKIN, DAVID L

ART UNIT PAPER NUMBER

1723

DATE MAILED: 08/01/2002

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/002,549

Applicant(s)

HIROSE, MASAHIKO

Examiner

David L. Sorkin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/452,731.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☒ Interview Summary (PTO-413) Paper No(s). 5
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Interview Summary

Application No.

10/002,549

Applicant(s)

HIROSE, MASAHIKO

Examiner

David L. Sorkin

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All participants (applicant, applicant's representative, PTO personnel):

(1) David L. Sorkin.

(3) _____.

(2) Jeffery Bergman.

(4) _____.

Date of Interview: 18 April 2002.

Type: a) ☒ Telephonic b) ☐ Video Conference
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.

If Yes, brief description: _____.

Claim(s) discussed: 1.

Identification of prior art discussed: _____.

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: A variety of section 112 issues were discussed, and although no overall agreement was reached, the examiner agreed that $y = 0$ was within the scope of claim 1 and said he would reconsider the issue of "sodium hydrocarbon", in light of Mr. Bergman's arguments that it was an "obvious error" and that it would be obvious that it should read - - sodium hydroxide - - .

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

i) ☐ It is not necessary for applicant to provide a separate record of the substance of the interview(if box is checked).

Unless the paragraph above has been checked, THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case unless both applicant and examiner agree that the examiner will record same. Where the examiner agrees to record the substance of the interview, or when it is adequately recorded on the Form or in an attachment to the Form, the examiner should check the appropriate box at the bottom of the Form which informs the applicant that the submission of a separate record of the substance of the interview as a supplement to the Form is not required.

It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to. The clerical staff of the USPTO have entered the twice amended version of claim 1 as it appears on page 2 of the amendment filed 09 May 2002 into the file. This appears to be a marked-up copy of the claims rather than a clean copy as required, although it differs from the marked up copy found in Appendix B of the amendment. A proper clean copy is required in response to this Office action.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1 and 4-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. The scope of claim 1 is unclear. Particularly, the scope of the "(a) component as represented by Formula 1" is unclear. In applicant's most recent communication applicant states "the values a, b, and c described by the formula merely represent the ratios of starting monomer used, and are not meant to represent a specific monomer sequence". Apparently, according to these arguments, applicant intends to make the "(a) component" through an undisclosed process in which three undisclosed starting compounds are present in amounts in proportion to a, b, c. One skilled in the art would be appraised to little or no degree of the scope of the "(a) compound" without knowing the chemical identities of the three starting compounds and the reaction conditions

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under which they should combined to make the "(a) compound". Applicant's argued interpretation of Formula 1 is tantamount to claiming a compound in a product by process claim without revealing the process or starting materials. Furthermore, there is insufficient reason to believe that one skilled in the art reading the specification and claims would interpret the definition of Formula 1 in the manner applicant now argues.

Some other possible interpretations are that

- i. the Formula indicates the actual number of monomer units in the actual order shown (For example $a = 100$, $b = 100$, $c = 100$ means 100 units of the "a" monomer, followed by 100 units of b, followed by 100 units of c).
- ii. the Formula indicates the actual number of monomer units shown, but in no particular order (For example, $a = 100$, $b = 100$, $c = 100$ means 100 units of each of each monomer type in no particular order).
- iii. the Formula indicates three homogeneous blocks, a, b and c, in the indicated order, but that the numbers a, b, and c indicate only ratios. (For example $a = 100$, $b = 100$, $c = 100$ means x units of the "a" monomer, followed by x units of b, followed by x units of c, where x is any integer.)
- iv. the Formula indicates only ratios of monomer units, in no particular order, but quantitatively represents the actual composition of compound (a), as opposed to merely three unknown starting materials in an unknown process (for example, $a = 100$, $b = 100$, $c = 100$ means that the (a) compound is $1/3$ a, $1/3$ b, and $1/3$ c).

It is also noted that in applicant's remarks filed with the preliminary amendment (paper No. 2), it is stated that "The value 'a' in the formula has been amended to reflect that a

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main chain of polyvinyl alcohol requires that at least two PVA repeat units be present in the polymer" (emphasis added), in blatant contradiction to the argument that a, b, and c refer only to relative amounts and in blatant contradiction to the argument that a, b, and c refer to only relative amounts of three compounds in an undisclosed process.

Furthermore, Formula 1, under applicant currently argued interpretation, would be open to $0\% < a < 100\%$; $0\% \leq b < 100\%$; and $0\% < c < 100\%$ (in the undisclosed process). Using the range " $c < 2$ " to indicate $0\% < c < 100\%$ is a difficult interpretation to accept. In support of applicant's currently argued interpretation, is the declaration of Osami Towzawa (paper No. 4), which states "one skilled in the art would know that these formulae simply reflect the relative ratios of the starting monomers". However, quoting MPEP 716.01 (c) and based upon *In re Chilowsky*, 134 USPQ 515 (CCPA 1962), "expert opinion that an application meets the requirements of 35 U.S.C. 112 is not entitled to any weight".

The examiner believes that while some weight should be given to what the formulae mean to Dr. Tozawa as a single person skilled in the art, no weight should be given to what Dr. Tozawa believes the formulae means to others. The examiner cites the following references as further evidence relating to how the Formulae would be interpreted by one skilled in the art. "Encyclopedia of Polymer Science and Engineering", vol. 2, pages 324-332; "Encyclopedia of Polymer Science and Technology", vol. 2, pages 485-523; Introduction to Industrial Polymers, pages 68 and 69; and US Patent No. 3,287,298. Each of these references discusses polymers having more than one type of monomer, in which like monomers are arranged in blocks, not randomly arranged. Formulae analogous to applicant's are used to designate these

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"block polymers". See especially "Encyclopedia of Polymer Science and Technology" page 508, formulae 12-14; and the discussion of the IUPAC nomenclature system in "Encyclopedia of Polymer Science and Engineering", pages 324-326 as well as the formulae such as $A_nB_mC_l$ on page 331 of the reference. Regarding applicant's argument about carbon-carbon bond formation, applicant is referred to pages 509 and 510 of "Encyclopedia of Polymer Science and Technology", particularly the description of making a polyisoprene- polystyrene-polyisoprene block polymer. See also US 3,287,298 regarding block polymers with carbon-carbon bonds.

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1 and 4-7 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The application as originally filed would not have conveyed to one skilled in the art the now-argued interpretation of "Formula 1" in claim 1. See discussion of section 112 second paragraph above.

7. Claims 1 and 4-7 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. One skilled in the would not be able to make the

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invention without undue experimentation because insufficient information concerning the "(a) compound" is provided. Even supposing one somehow selected applicant's now-argued interpretation of formula 1, that the formula refers to the ratio of three undisclosed starting materials in an undisclosed process of making "compound (a)". One would not be able to make "compound (a)" without knowing the undisclosed process and starting materials. Furthermore, even if one developed a process of making a polymer with the same three monomeric units indicated by the formula, one would not know if other factors, such as polymer chain length and monomer distribution within the polymer, matched those of the polymer made by the undisclosed process and therefore would not know if they succeeded in making the invention.

Response to Arguments

8. Several of the previous grounds for objection and rejection have been withdrawn, rendering the corresponding arguments moot. The remaining arguments have been fully addressed in the body of the rejections above.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

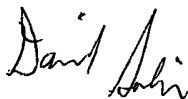
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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Sorkin whose telephone number is 703-308-1121. The examiner can normally be reached on 8:00 -5:30 Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 703-308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



David Sorkin

July 22, 2002



W. L. WALKER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700